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U.S. DEPARTMENT OF COMMERCE
United States Patent and Trademark Office



PCT 16 JUL 2008

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To the Director of the U.S. Patent and Trademark Office

103515059

ments or the new address(es) below.

1. Name of conveying party(ies):

Tomotaka Ishida (05/30/2008), Mitsuru Yamamoto (05/30/2008), Sakae Kitajo (05/30/2008), and Kazuhiro Kumakura (05/30/2008)

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies)

Name: NEC CORPORATION

Internal Address: _____

Street Address: _____

7-1, Shiba 5-chome, Minato-ku

City: Tokyo

State: _____

Country: JAPAN Zip: 108-8001

Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance/Execution Date(s):

Execution Date(s): in parentheses after inventor name

Assignment Merger Change of Name

Security Agreement Joint Research Agreement

Government Interest Assignment

Executive Order 9424, Confirmatory License

Other _____

4. Application or patent number(s):

This document is being filed together with a new application.

A. Patent Application No.(s)

This application

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address to whom correspondence concerning document should be mailed:

Name: James E. Armstrong, IV
EDWARDS ANGELL PALMER & DODGE
LLP

Internal Address: Atty. Dkt.: 81775(302960)

Street Address: P.O. Box 55874

City: Boston

State: MA Zip: 02205

Phone Number: (202) 478-7375

Fax Number: (202) 478-7380

Email Address: jarmstrong@eapdlaw.com

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

Authorized to be charged by credit card

Authorized to be charged to deposit account

Enclosed

None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____

b. Deposit Account Number 04-1105
Authorized User Name James E. Armstrong, IV

9. Signature:

July 16, 2008

Date

James E. Armstrong, IV - 42,266

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

8

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RECORDATION FORM COVER SHEET (supplemental sheet)

Additional Conveying Party(ies)/Execution Date(s) (1. Continued):

Additional Assignees (2. Continued):

Assignee Name: SHOWA DENKO K.K.

Internal Address:

Street Address: 13-9, Shiba Daimon 1-chome, Minato-ku

City: Tokyo State: Country: JAPAN Zip: 105-8518

Assignee Name:

Internal Address:

Street Address:

City: State: Country: Zip:

Assignee Name:

Internal Address:

Street Address:

City: State: Country: Zip:

Additional Applications and/or Patents (4. Continued):

Additional Patent Application Numbers 4A. Continued:

Additional Patent Numbers 4B. Continued:

Additional numbers attached? Yes No

ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made by Tomotaka Ishida; Mitsuru Yamamoto; Sakae Kitajo; and Kazuhiro Kumakura (hereinafter referred to as Assignors), residing at c/o NEC CORPORATION, 7-1, Shiba 5-chome, Minato-ku, Tokyo, 108-8001, JAPAN; c/o NEC CORPORATION, 7-1, Shiba 5-chome, Minato-ku, Tokyo, 108-8001, JAPAN; c/o NEC CORPORATION, 7-1, Shiba 5-chome, Minato-ku, Tokyo, 108-8001, JAPAN; and c/o SHOWA DENKO K.K., OYAMA REGIONAL OFFICE, 480, Inuzuka 1-chome, Oyama-shi, Tochigi 323-8678, JAPAN, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in LIQUID-COOLED HEAT RADIATOR

set forth in a Patent application for which an International Application was filed on January 23, 2007, PCT/JP2007/050941, designating the United States; and

WHEREAS, NEC CORPORATION and SHOWA DENKO K.K., corporations organized under and pursuant to the laws of Japan having their principal places of business at 7-1, Shiba 5-chome, Minato-ku, Tokyo, 108-8001, JAPAN; and 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo, 105-8518, JAPAN, respectively (hereinafter referred to as Assignees), are desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignees, their successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters

Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignees, for their own use and benefit and the use and benefit of their successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignees, their successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignees under law or that have already been transferred to Assignees, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignees, their successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignees, their successors, legal representatives and assigns, whenever counsel of Assignees, or counsel of their successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignees, as

Assignees of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignees, their successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document:

EDWARDS ANGELL PALMER & DODGE LLP

All practitioners at Customer Number 21874

AND Assignors acknowledge an obligation of assignment of this invention to Assignees at the time the invention was made.

Date: 30 May 2008

Signature:  Tomotaka Ishida
Tomotaka Ishida

Date: 30 May 2008

Signature: Mitsuru Yamamoto
Mitsuru Yamamoto

Date: 30 May 2008

Signature: Sakae Kitajo
Sakae Kitajo

Date: _____

Signature: _____
Kazuhiro Kumakura

ASSIGNMENT BY INVENTORS

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AND for the same consideration, Assignors hereby represent and warrant to Assignees, their successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignees under law or that have already been transferred to Assignees, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignees, their successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignees, their successors, legal representatives and assigns, whenever counsel of Assignees, or counsel of their successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

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EDWARDS ANGELL PALMER & DODGE LLP

All practitioners at Customer Number 21874

AND Assignors acknowledge an obligation of assignment of this invention to Assignees at the time the invention was made.

Date: _____ Signature: _____
Tomotaka Ishida

Date: _____ Signature: _____
Mitsuru Yamamoto

Date: _____ Signature: _____
Sakae Kitajo

Date: 30 May 2008 Signature: Kazuhiro Kumakura
Kazuhiro Kumakura